DOCUMENT RESUME

ED 110 168 PS 007 942

TITLE	Early Childhood Education. First Annual Evaluation Report 1973-74.
INSTITUTION	California State Dept. of Education, Sacramento. Office of Program Evaluation.
PUB DATE	[75]
NOTE	38p.
AVAILABLE FROM	Early Childhood Education, State Department of Education, 721 Capitol Mall, Sacramento, California 95814 (Paper, no price quoted)
EDRS PRICE	MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS	*Comprehensive Programs; *Early Childhood Education; Health Services; Inservice Education; Language Skills; Mathematics Instruction; Parent Education; Parent Participation; *Program Descriptions; *Program Evaluation; Reading Improvement; Staff Improvement; *State Programs; State Standards
IDENTIFIERS	*California State Department of Education

ABSTRACT

This report provides a statewide summary and evaluation of the first year of operation of the early childhood education program funded by the State of California. Approximately 800 school districts throughout the state provided early childhood education programs for 172,073 pupils in K-3 (14 percent of statewide enrollment). Master plans, developed by parents, teachers, and administrators in the participating schools, were designed to assure individualized instruction for children beginning at age 3 years, 9 months. The program components included: community and parent participation and education, emphasis on increasing pupil competencies (especially in reading, language, and mathematics), program staff development and inservice education, health care services, and locally needed options. The evaluation of program components focuses on the effectiveness of individual programs in meeting their own objectives. Program weaknesses are also discussed. Overall program results indicate significant improvement of pupil achievement, especially for disadvantaged children. Approximately one-third of the report is made up of tables. (ED)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED110168

Early Childhood Education

First Annual Evaluation Report 1973-74

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

Compiled by
The Office of Program Evaluation and Research
State Department of Education

PS 007 942

VA 2/3

This publication was edited and prepared for photo-offset production by the Bureau of Publications, California State Department of Education, and published by the Department, 721 Capitol Mall, Sacramento, California 95814

Printed by the Office of State Printing
and distributed under the provisions
of the Library Distribution Act
1975

06604

Foreword

The early childhood education program is providing a major new direction to the education of California's schoolchildren. The program was launched when the state's Legislature and the Governor approved Senate Bill 1302 (Chapter 1147, Statutes of 1972).

Developed by the State Department of Education and sponsored by the State Board of Education, the new program involved 172,073 children in 1973-74, its first year of operation. A total of 1,013 schools in 800 school districts—80 percent of all school districts in the state—participated in the program.

Prior to the establishment of the early childhood education (ECE) program, most educational change followed a fragmented approach along "categorical" lines. This approach resulted in the development of numerous special supplementary programs to solve specific problems in narrow areas of concern. By 1972 more than 30 different state and federal programs had been established to help solve problems for special portions of the general pupil population or to remedy special deficiencies in the school curriculum. The weaknesses in such fragmented approaches were obvious:

- Some programs emphasized remediation, trying to make up for past failures instead of seeking to prevent problems.
- None encouraged a comprehensive educational strategy for all children at the school sites.
- Many were based on a search for a panacea which, if discovered, would immediately cure all of education's ills.
- Many did not recognize the need for the commitment of all concerned—including parents, school boards, teachers, and administrators—to achieve success of a school's total program.

The designers of ECE recognized these weaknesses and sought to correct them and at the same time to build on the positive aspects of the state and federal programs that were already in operation.

Early childhood education was built on the premise that too often the public schools failed to capitalize on the unique learning opportunities in the early years of a child's life. Avoidable educational deficiencies developed in the education of our children as a result of the failure to provide adequate support in these early years. Costly remedial programs have consequently been required to overcome these deficiencies.

Recognizing the need for additional support for school programs in the primary grades, the early childhood education program provided $130 per pupil enrolled. It is important to note the the ECE legislation required that at least 50 percent of the participating schools be those with the greatest educational need. For educationally disadvantaged children attending these schools, additional funds were allocated either through the ECE program or appropriate state and federal categorical aid programs.

The concentration of additional funding on each pupil enrolled in ECE was combined with a plan of action. All districts seeking ECE funds were required to prepare an individual school-by-school plan developed by parents, teachers, and administrators at the school site, which included provision for the following:

- Assessing the educational needs of the local community
- Restructuring the educational program in kindergarten through third grade, including individualized instruction

00005

- Defining measurable program objectives
- Coordinating the use of all educational resources—federal, state, and local—to meet the needs of the children
- Involving parents directly in the education of their children
- Providing staff development and inservice training
- Evaluating the results of the program
- Requiring approximately a 1-to-10 adult-pupil ratio

This evaluation report shows that after the first year of operation, the ECE program resulted in significant improvement in pupil achievement.

In reading/language development, pupils participating in ECE made 11 months of educational gain for each 10 months of instruction. The typical learning rate for all children is 10 months of growth for 10 months of schooling. The typical gain for disadvantaged children not served by a special program is 7 months growth for 10 months of schooling. And the typical gain for disadvantaged children enrolled in a successful compensatory education program of Title I of the Elementary and Secondary Education Act is month for month. When ESEA, Title I, was made part of the comprehensive local planning process required by ECE, however, the typical gain for disadvantaged children was increased to 13 months for 10 months of instruction.

The ECE test scores probably underrate the actual achievement growth of the total enrollment, since some schools with the lowest percentage of disadvantaged pupils were not required to use standardized achievement tests. As a result, their gains are not included in the typical ECE pupil gain.

In mathematics, pupils participating in the ECE program gained at the rate of 12 months for 10 months of schooling. As in the case of reading, the typical gain for all pupils in mathematics is 10 months gain for 10 months of schooling. The typical gain for disadvantaged children not involved in special programs is 7 months for 10 months of schooling, while the typical gain for disadvantaged children enrolled in special compensatory education programs is 9 months for 10 months of schooling.

Since many schools with the least number of disadvantaged children were not required to participate in the ECE achievement tests for mathematics, the actual ECE gain is probably higher than the official figure indicates.

In addition to the reported achievement gains, the 1973-74 evaluation indicates that participating schools had initiated a wide variety of programs to improve parental involvement in the education of their children. These programs ranged from providing general information to parents about the content of school programs to helping parents in specific education activities with their children. The program also generated substantial parent and community involvement in school programs. Approximately 23,000 volunteers and 8,000 paid aides were reported as having worked in ECE's 1,013 schools in 1973-74. In addition, the evaluation found that ECE programs focused on improvements in techniques of individualized instruction and the use of diagnostic/prescriptive techniques. Programs providing diagnostic health services were found to be particularly helpful for participating children.

According to the 1973-74 evaluation of the early childhood education program, nearly 50 percent of the ECE schools included locally determined components such as bilingual-bicultural education, English as a second language, music, and art. The selection of these components resulted from assessments of local needs, as required of all participating ECE schools.

In the ECE effort the State Department of Education has a threefold responsibility:

1. To assure that appropriate planning, implementation, and evaluation have taken place
2. To administer the expansion of the program
3. To evaluate and report the statewide results of ECE

00006

In accord with these responsibilities, the Department monitored ECE in a variety of ways. All schools, for example, were required to submit detailed plans, which were rated by ECE consultants. In addition, as part of a program audit, participating schools' plans were reviewed by staff at the school sites. Parents, teachers, and administrators participated in this review. Apparently, this close attention to the implementation of each ECE school's plan is one of the most important reasons why the program has achieved most of its goals.

ECE policies also required fiscal controls which resulted in 59 percent of the schools reporting expenditures within 5 percent of their estimated budgets.

As with any major program in its first year of operation, certain administrative refinements and program improvements are required to keep ECE moving successfully forward. This evaluation report has pinpointed the following areas where action is required, and every effort will be made by the State Department of Education to respond to these needs:

- Guidance is required for districts regarding the distinction between parent involvement and the education of parents.
- Further requirements are necessary for the reporting of staff development activities.
- Districts should be encouraged to expand health and auxiliary services.
- Standardized testing for all ECE participants is necessary.
- Districts need to budget for local evaluation at both the district and school levels.
- Activities must be initiated to improve coordination with other state and local agencies to improve the delivery of local health services.

In summary I believe that this report shows that the early childhood education program has resulted in significant gains in pupil achievement. The level of performance achieved by ECE is unprecedented for a program of such magnitude. I further believe that these findings justify substantial expansion of ECE in the 1975-76 school year.

I congratulate the thousands of persons—teachers, school administrators, board members, community leaders, teacher aides, students, parents, and Department of Education employees—who worked so hard to make the first year of this program a success for the children.

I commend the following evaluation report on their behalf to all Californians.

Superintendent of Public Instruction

Contents

	Page
Foreword	iii
Abstract of the Evaluation Report for Early Childhood Education	1
Findings of the Evaluation	1
Product Evaluation	1
Process Evaluation	1
Fiscal Evaluation	2
Conclusions of the Evaluation	2
Areas Needing Attention	2
Chapter 1 Introduction	4
Participants in the Early Childhood Education Program	5
Personnel in the Programs	6
Chapter 2 Program Implementation	8
Chapter 3 Product Evaluation	11
Reading/Language Development Component	11
Participation in Reading Instruction	11
Objectives, Activities, and Findings	12
Mathematics Component	16
Participation in Mathematics Instruction	16
Objectives, Activities, and Findings	16
Health/Auxiliary Services Component	19
Objectives and Activities	19
Evaluation of Health/Auxiliary Services	19
Parent Education Component	21
Parent Participation and Community Involvement Component	22
Staff Development and Inservice Education Component	24
Objectives and Activities	24
Evaluation and Results	24
Recommendations for Improving Staff Development	24
Optional Components	25
Chapter 4 Fiscal Management	26
Recommendation	26

TABLES

Table		
1	Method of Weighting Evaluation Areas for ECE School Composite Score	5
2	Students in ECE Program Compared to Total Statewide Enrollment, 1973-74	6
3	Total 1973-74 ECE Program Participants, by Component	6

00008

Table		Page
4	Personnel Working in the 1973-74 ECE Program (Full-time equivalent)	7
5	Statewide Distribution of Scores for Determination of Expansion Eligibility, Spring, 1974	9
6	Distribution of ECE Classroom Activities Reported by Program Component, December, 1973	10
7	Average Program Effectiveness Ratings Compared to Results of On-site ECE Program Audits and School-level Plan Ratings	10
8	Number and Percent of Students Tested in ECE Reading/Language Development, 1973-74	11
9	Students Tested in ECE Reading/Language Development, by Funding Source, 1973-74	12
10	Quality of ECE Schools' Objectives in Reading/Language Development Programs for Each of Six Types of Results Reported, 1973-74	12
11	Classroom Strategies Most Frequently Reported by Successful Reading/Language Development Programs in ECE Schools, 1973-74	13
12	Evaluation Tools Most Frequently Reported by Successful Reading/Language Development Programs in ECE Schools, 1973-74	13
13	Average ECE Student Progress in Reading/Language Component, 1973-74	13
14	Average Grade One ECE Student Progress in the Reading/Language Component, by Funding Source, 1973-74	14
15	Average Grade Two ECE Student Progress in the Reading/Language Component, by Funding Source, 1973-74	14
16	Average Grade Three ECE Student Progress in the Reading/Language Component, by Funding Source, 1973-74	14
17	ECE Program Test Results as Compared to 1974 State Assessment Program Results, by Funding Source	15
18	Number of ECE Students Tested and the Distribution of Reading/Language Development Achievement Scores at Pretesting and Post-testing, 1973-74	15
19	Number and Percent of Students Tested in ECE Mathematics Programs, 1973-74	16
20	Number and Percent of Students Tested in ECE Mathematics Programs and Percent Supported by Each Funding Source, 1973-74	16
21	Quality of ECE Schools Objectives in Mathematics Programs for Six Types of Results Reported, 1973-74	16
22	Activities Most Frequently Reported by Successful Mathematics Programs in ECE Schools, 1973-74	17
23	Evaluation Tools Most Frequently Reported by Successful Mathematics Programs in ECE Schools, 1973-74	17
24	Average Mathematics Achievement by ECE Students, 1973-74	18
25	Number of Grade One ECE Students Tested and the Average Mathematics Achievement, by Funding Source, 1973-74	18
26	Number of Grade Two ECE Students Tested and Average Mathematics Achievement, by Funding Source, 1973-74	18
27	Number of Grade Three ECE Students Tested and Average Mathematics Achievement, by Funding Source, 1973-74	19

00009

Table		Page
28	Distribution of ECE Student Mathematics Achievement Scores at Pretesting and Post-testing, 1973-74	19
29	Health/Auxiliary Services Program Objectives Most Frequently Attained in ECE Schools, 1973-74	21
30	Most Frequently Reported Parent Responses to ECE Parent Education Activities, 1973-74	22
31	Effects of Parent Involvement Reported by ECE Schools Whose Results Related to Stated Objectives, 1973-74	23
32	Results of Staff Development Activities Most Frequently Reported by Successful ECE Schools, 1973-74	25
33	Total ECE Expenditures by Account Classification, 1973-74	27

FIGURES

Figure		
1	Relative importance and effectiveness of ten major pupil personnel services in ECE schools, 1973-74	20
2	Relative importance and effectiveness of five major library and media services, as reported by ECE Schools, 1973-74	20
3	Relative importance and effectiveness of seven major health services, as reported by ECE Schools, 1973-74	20
4	Relative importance and effectiveness of five major parent education activities in ECE schools, 1973-74	22
5	Relative importance and effectiveness of nine parent involvement activities provided by ECE schools, 1973-74	23
6	Relative importance and effectiveness of ten staff development activities provided by ECE schools, 1973-74	24

00010

Abstract of the Evaluation Report for Early Childhood Education

Findings of the Evaluation

Product Evaluation

Reading/language development. The early childhood education (ECE) schools reported that they made serious efforts in 1973-74 to restructure language and reading programs by using diagnostic and prescriptive materials. The extent to which the efforts in restructuring programs were successful is indicated by the high level of achievement gains reported. The typical student in the ECE program attained 1.1 months gain for each month of instruction, with some school gains as high as 1.4 months per month of instruction. Because some ECE schools were not required to use standardized achievement tests, the test scores reported may, in fact, be an underestimate of the actual pupil growth.

Mathematics. For mathematics programs the schools reported a variety of activities designed to improve pupil performance. The success of these programs can be judged by a reported typical gain of 1.2 months for every month of instruction. Again, since all schools did not use standardized tests, the reported gain may, as in the case of the reading/language development component, be an underestimate of the actual gain.

Health/auxiliary services. Schools with successful ECE programs rated diagnostic services in particular as the most helpful and most important. There were several discrepancies between the schools' judgments of which health/auxiliary services were most important, on the one hand, and which were the most effective, on the other. The schools judged attendance and dental and medical services to be the most important but did not find them to be effective in accomplishing school goals.

Parent education. Most schools, with the goal of reinforcing their education programs, simply attempted to provide general information to the parents about the content of their programs. A few schools, recognizing that the parents' needs differed from the original assessment of needs that had been made, changed their parent education programs some time during the year. A few other schools which experienced the same problem but which had not changed their approach to parent education reported that they planned to make program changes in the future.

Optional component. The optional component covered a wide range of program choices. Schools could choose to implement any activity that met their unique needs and interests. Nearly one-half of the ECE schools included an optional component such as music, art, bilingual-bicultural education, and English as a second language. At least 90 percent of the optional programs were also reported as having been fully or partially realized.

Parent participation and community involvement. Significant numbers of volunteers were involved in the ECE schools in 1973-74. Approximately 23,000 volunteers worked in the ECE programs of the 1,013 participating schools, and another 8,000 paid aides were also involved in the ECE program.

Parent involvement activities were most often reported in terms of pupil performance and increased parent attendance at school conferences and meetings. At least 34 percent of the schools still felt that they needed to involve more parents.

Staff development. The staff development activities in the early childhood education schools generally focused on improvement in techniques of individualized instruction and on the use of diagnostic/prescriptive materials. College classes were ranked high in importance but low in effectiveness, and demonstrations were ranked low in importance but high in effectiveness.

Process Evaluation

The ECE program implementation design was carefully developed. Schools submitted detailed plans, which were rated by ECE consultants;

90611

schools were visited by ECE consultants for the purpose of making program audits; and schools were required to report on their time management system by completing three periodic reports. Scrutiny of the schools' implementation of their plans resulted in a closer match between plans and outcomes compared to prior efforts with other special funding programs. The schools' own process reports were evaluated in terms of expected levels of achievement so that direct services could be given to schools.

Fiscal Evaluation

Fifty-nine percent of the schools reporting showed expenditures within 5 percent of their estimated budgets.

Salaries of aides and certificated staff and related fringe benefits accounted for 68 percent of school level expenditures. Instructional supplies and books accounted for an additional 17.8 percent of the budget.

Conclusions of the Evaluation

This report represents a statewide summary and analysis for the first year of programs funded under early childhood education regulations. In 1973-74 all state and federally funded programs were approved on the basis of a consolidated application form that was designed to combine the funding sources available to a school or school district. This report on the ECE program is the first of a series of evaluation reports prepared from the consolidated application and the evaluation processes.

The conclusions of this evaluation report on the early childhood education program for 1973-74 follow:

- The performance levels which were reported indicate that pupils enrolled in ECE programs generally achieved substantial gains in the reading/language development component and in the mathematics component. These gains exceeded expected performance levels in all cases.
- Most participating schools were able to meet the objectives that they set in their individual school level plans.
- Significant numbers of support and volunteer personnel were directly involved in the implementation of the ECE program.
- The results indicate a close relationship between program planning and implementation; however, further refinement is necessary.
- The distinction between the parent education and parent involvement components was not as well defined in practice as it was in the program policies and guidelines. In too many cases, "education" meant participation in school activities, and "involvement" meant better understanding of child growth and development.
- Staff development objectives reported most often related to the improvement of teaching techniques in reading, mathematics, language, and the general curriculum. Staff development was rarely evaluated in terms of the implementation of the inservice training in the classroom.
- Very little money appears in school budgets for health/auxiliary services. Schools were encouraged to obtain services from community resources, but the reports from many schools indicated that the most important services, dental and medical, were the least effective in terms of actual implementation of school plans
- The research report on the inclusion of four-year-olds in the program was not part of this year's evaluation report. This study will be delayed until more data have been collected on the success of the ECE program in meeting the goals presently set for the kindergarten through grade three population.

Areas Needing Attention

As a result of the evaluation of the early childhood education program, the following matters have been identified as needing attention:

- Schools conducting ECE programs need to plan to collect achievement data on normative standardized tests, at least annually, to provide a comparable data base for all ECE schools in the state of California.
- Schools in which reading achievement levels exceeded the state's expected level of achievement but that failed to meet their own objectives need to have their programs thoroughly reviewed; schools that met their objectives need to have their programs reviewed to determine what factors made their programs successful.
- In order to determine if programs met with success or failure, the State Department of Education needs to retain the present application and evaluation processes (with minor modifications) for a three-year period of time.
- The "program-implementation" reporting process needs to be revised by the State Department of Education to clarify the concept of time-management evaluation. "Time management" refers to the process of implementing the activities planned within each component according

00012

to the time schedule in the school plan State inservice training programs need to be directed toward time-management concepts and procedures by which school plans should be amended.

- At the district level, provisions need to be made so that schools not only plan but also budget for program evaluations. School district personnel (administrators or teachers) need to be assigned the responsibility for program evaluation within a school district and at a specified school site.
- Data collected by the Department of Education from norm-referenced standardized achievement tests need to be in the form of raw scores, permitting analysis and conversion of those scores and aggregation of them for several schools.
- The State Department of Education, in cooperation with the State Department of Health and county health departments, needs to explore ways in which health services can be provided more effectively to ECE schools.

Cooperatives are formed when small school district programs are administered through a common local educational agency, usually the office of a county superintendent of schools. Four-hundred three small school districts were funded through cooperatives. The following matters which related to the cooperative projects have been identified as needing attention:

- The role and responsibility of cooperative projects need to be more clearly specified in guidelines and regulations. For administrative purposes, cooperative projects are treated as local agencies, but the extent of cooperative projects' authority to implement their functions is not spelled out.
- A separate application and reporting process, appropriate to the special needs of small districts, needs to be developed.

00013

Chapter 1

Introduction

The intent of the early childhood education program (ECE) and subsequent legislation was to provide a comprehensive program for children in kindergarten and grades one, two, and three. This program was to be developed by each school district. Under the provisions of Senate Bill 1302 (Chapter 1167, Statutes of 1972), a comprehensive school-by-school master plan for the primary grades was to be developed at each school with the participation of parents, teachers, and administrators that would assure:

- (a) A comprehensive restructuring of primary education in California, kindergarten through third grade, to more fully meet the unique needs, talents, interests, and abilities of each child.
  (b) That early educational programs that are or may be made available to children who are 3 years and 9 months of age be coordinated with the restructuring of primary education in California in order to take advantage of the capacity for learning of children at this age level.
  (c) The cooperation and participation of parents in the educational program to the end that the total community is involved in the development of the program.
  (d) The pupils participating will develop an increased competency in the skills necessary to the successful achievement in later school subjects such as reading, language, and mathematics.[1]
- Efficient allocation of all funds available to each school for the implementation of coordinated early childhood education programs.[2]
- Individualized instruction to see that every child's needs, talents, interests, and abilities will be accommodated.
  A classroom staffing pattern in which the adult-pupil ratio is approximately 1 to 10 by employing teacher aides, volunteers, and parents.[3]

The early childhood education program has been designed to be phased in to all elementary schools over a period of years. In this first year, 12 percent of the kindergarten and grades one, two, and three population was to participate in the program. At least one-half of the student participants were to come from schools identified by the local district as being of the greatest educational need. The following evaluation report is based upon the data collected from the participating schools.

In the 1973-74 school year, approximately $24 million was allocated to 1,013 ECE schools. A total of $130 was allocated for each student, with additional funds made available for disadvantaged pupils. There were 183 schools that received the $130-per-pupil ECE funds; the other schools received the basic grant of $130 for all children, plus extra funds for students identified as educationally disadvantaged youth (EDY). A State Board of Education policy provided a minimum of $350 to a maximum of $550 per child for the specific needs of educationally disadvantaged youth. Of the $350 to $550 allowable expenditure for the educationally disadvantaged youth, $65 was funded for children in kindergarten and grades one, two, and three with ECE funds; the balance was funded by a combination of ESEA, Title I, and Senate Bill 90 EDY funds.

During 1973-74, approximately 800 school districts throughout the state provided ECE programs for 172,073 pupils in kindergarten through grade three. This group represented 14 percent of the statewide enrollment. Since districts with only one school were funded at 50 percent (usually all of their kindergarten and grade one students), the actual per-

---

[1] California Education Code, Division 6, Chapter 6.1, Section 6445.

[2] *Early Childhood Education Recommendations for Program Implementation.* Prepared under the direction of H. Glenn Davis. Sacramento: California State Department of Education, 1974.

[3] *Policies for Early Childhood Education.* Prepared under the direction of H. Glenn Davis. Sacramento. California State Department of Education, 1973, pp. 4 and 5.

00014

cent funded was larger than the 12 percent planned for the first year.

Some of the early childhood education schools were funded only by ECE monies, and others were multifunded with other state and federal funds. This money was specifically allocated to supplement district effort, not supplant it. The report will separate data for the various funding sources when such separation is required for clarity of information. If separation is not required, the data will reflect the total early childhood education program for 1973-74.

The required components of the ECE program are:

- Reading/language development
- Mathematics
- Health/auxiliary services
- Parent participation and community involvement
- Parent education
- Staff development and inservice education

Each school (parents, teachers, administrators) was to develop a plan, including all of the components listed above. This plan constituted the terms of a contract between the school district and the state. The ECE plan included measurable objectives in all components. School staff generally evaluated the plan by "hard" data such as achievement tests in academic areas and "soft" data, such as questionnaires or observations in the support areas. All of these components and their evaluations are reported in this evaluation document, along with the process evaluation information and the fiscal report, as required by the enabling legislation.

The ECE program has been operational in California public elementary schools for one full program year. This "year" actually includes several months of preprogram planning time and additional months for revision, evaluation, and resubmission of school plans.

By law, the program evaluation of ECE was concerned with both the process of program implementation and the product of the program. The following areas were covered in the evaluation process:

- The extent to which major program functions were accomplished, as well as quantitative estimates of pupil progress which were reported for each participating school. (See Education Code Section 6445.10.)
- The changes or benefits resulting from the accomplishment of major functions. The statutes require an annual review of the success of each local district in meeting the objectives of its approved plan. As a result of the annual evaluation, programs considered to be successful in meeting their objectives will be continued and their program expanded. (See Education Code Section 6445.8.)

The success of the local district in meeting its objectives was determined primarily from the data in the required annual report. It was, therefore, the responsibility of the local program staff to provide an adequate local evaluation to document the success of the program in meeting the district's objectives. The annual district report form requested information related to: (1) fiscal expenditures; (2) degree and success of program implementation; and (3) quantitative estimate of pupil progress.

The district collected and reported the required data, school by school. From these data, the State Department of Education derived a composite score for each school. This composite score was derived and weighted as shown in Table 1.

The State Department of Education computed an index of student attainment for each participating school, using factors which have been shown to be predictive of school success.

Participants in the Early Childhood Education Program

In the ECE program, all children within a funded class were defined as program participants. The only children at a funded grade level within a school who were not participants were those assigned to various special education day classes such as classes for the educationally handicapped. Children who were assigned to special programs for a limited part of the day, but who were counted on

Table 1

Method of Weighting Evaluation Areas for ECE School Composite Score

Area evaluated for degree of success	Weight for composite score, by percent		
	First year	Second year	Third and following years
Fiscal management	20	10	0
Program implementation	70	50	50
Pupil progress	10	40	50

00015

the regular class attendance rolls for purposes of computing average daily attendance, were considered ECE program participants. Table 2 shows the total number of student participants by grade level.

Program participants in the early childhood education program included parents, school personnel, and other community members. In each program component there were different combinations of participants. Table 3 depicts the number of participants who were involved in at least 75 percent of the activities in each component. Participants who were involved in more than one component were counted for each component in which they participated (duplicated count). Two of the components, intergroup relations and English as a second language, were not mandatory for all early childhood education schools. Intergroup relations was required only for ECE schools cofunded with ESEA, Title I; and English as a second language or bilingual education was required in schools where there was an identified need for such programs. The optional component was included, by choice, in many early childhood education school plans and included activities not described or contained in other components.

Table 2

Students in ECE Program Compared to Total Statewide Enrollment, 1973-74

Grade level	Total K-3 enrollment*	ECE Students	
		Number	Percent of total
Kindergarten	307,223	52,798	17
One	313,541	52,279	17
Two	308,131	35,165	11
Three	321,468	31,831	10
Total	1,250,363	172,073	14

*Total state enrollment as of December, 1974.

Personnel in the Programs

The number of persons (full-time equivalent) employed in early childhood education programs is shown in Table 4. When schools reported using multifunds for their programs, the exact number of positions funded by ECE monies was not identifiable. Instructional aides and teacher assistants constituted the largest category of persons hired. A total of more than 23,000 volunteers contributed a significant portion of time to the program.

Table 3

Total 1973-74 ECE Program Participants, by Component

Program component	Number of program participants*			
	Students	Parents	School personnel	Other†
Reading/language development	281,873			2,146
Mathematics	273,002			1,646
Auxiliary services	256,261			2,183
Intergroup relations	210,054			1,905
Parent participation and community involvement		117,856		1,898
Parent education		65,461		690
Staff development			27,105	
English as a second language or bilingual education	13,111			248
Optional component	53,326	4,037	2,061	824

*In schools having multifunds, grades four through eight are included. Children who participated in more than one component are counted for each component.

†"Other" includes persons from the community and nontarget children in upper grades.

00016

Information presented in the tables included in this evaluation report, as well as the information reported by the consultants from the Early Childhood Education Management Team who visited each school, indicated that parents and other community persons volunteered their services to the schools. More than 23,000 volunteers were reported, excluding the cross-age tutors and older elementary children who helped in classrooms. The consultants found that a real effort was being made to lower the adult-pupil ratio, and the reports from schools confirm that this was an area of major concern.

Table 4

Personnel Working in the 1973-74 ECE Program (Full-time equivalent)

Type of personnel	ECE funded only	Multifunded	Total*
Classroom teachers	284	1,136	1,420
Reading specialists	32	874	906
Mathematics specialists	4	281	286
English as a second language personnel (Title I)	1	153	154
Bilingual specialists (AB 2284)	12	84	96
Teacher aides and assistants	957	6,956	7,913
Community aides	99	454	553
Directors, supervisors, coordinators, and resource personnel	42	444	486
Counselors	4	115	119
Library media specialists	5	62	67
Library media aides	15	160	175
Teacher librarians	1	21	22
Psychologists and psychometrists	4	55	59
Social workers and attendance counselors	0	18	18
Nurses	2	124	126
Clerks and custodians	84	277	361
Evaluators	1	43	44
Other paid employees	33	304	337
Total paid personnel	1,580	11,562	13,142
Unpaid volunteers†	5,501	17,791	23,292

*In some cases data include personnel hired for grades four through eight.
†Types not listed.

00017

Chapter 2

Program Implementation

The data collected show that a program with well-defined plans and program audits can be evaluated with greater confidence in the accuracy of the evaluation product than a program with poorly defined plans.

The legislative mandate for the yearly evaluation of the early childhood education program requires an emphasis on the degree to which the program is implemented. During the first year, program implementation constituted 70 percent of the overall evaluation rating for each school; during the second and succeeding years, 50 percent of the overall evaluation rating will be based upon program implementation. The remaining 30 percent in the first year and 50 percent in the second year are related to student progress and fiscal management, as prescribed in the statutes.

The program implementation data for 1973-74 were obtained from three sources. First, each participating school submitted a school-level plan, Form A-127-S. Using a form developed by the Early Childhood Education Management Team, each plan was reviewed and independently rated by at least two team members. The average of the two ratings was converted to a standard score. When the results of the two independent ratings differed more than a set amount, a third independent rating was conducted, and the three ratings were averaged and converted to a standard score for that school.

From December, 1973, through the first week of March, 1974, a total of 870 of the 1,013 early childhood education schools were visited by the Department of Education's early childhood education program audit teams, and the reports of these teams comprised the second source of program implementation data. Due to limited time, 140 very small schools funded for less than $4,000 per school were not visited. The on-site program audit consisted of a visit to the school by one or more consultants from the ECE Management Team. The forms and program audit review directions were sent to each school at least two weeks before the scheduled visit so that self-evaluation by the parents, teachers, and principal could be done. The purpose of the program audit was to review the program in the first year of operation to:

1. Determine whether or not all statutory requirements were being met, with special emphasis on parental involvement in planning, implementing, and evaluating the program at the school-site level.
2. Assess the quality of the program as it was being implemented in comparison with (a) the individual school program design developed by each school; and (b) the intent of the program as set forth in the Early Childhood Education Task Force Report and the State Department of Education's early childhood education recommendations, as authorized by statute.

While in the school, consultants observed classroom activities; interviewed parents, teachers, and staff; and, using a 10-point scale, rated the school on an observed implementation of the school's own early childhood education plan. These ratings were converted to a standard score.

A third evaluation procedure was developed by the Office of Program Evaluation and Research as part of the consolidated evaluation format. This procedure was incorporated in the E-127-I form, which was a report due from each school in December, 1973; April, 1974; and with the final evaluation report due in July, 1974. The first report (December, 1973) was also converted to a standard score. The quality rating of the school plan, as designed by each school; the quality of implementation, as determined by the program audit; and the results of the December, 1973, E-127-I evaluation report were used to rank schools for eligibility for expansion candidacy.

00018

Determination of eligibility for expansion funds for 1974-75 was based on the ranking of schools, using each of the three sources of information weighted as follows: 50 percent for the program audit; 25 percent for the school-level plan; and 25 percent for the December program implementation report. Table 5 shows the data used for expansion eligibility.

School districts whose programs were deemed low in quality by these three measures were denied eligibility for expansion candidacy. They received direct service from the ECE staff to help them improve their programs. These schools' programs will be reevaluated in 1974-75 to determine their eligibility to expand programs in the 1975-76 school year.

The final determination of the degree and success of program implementation was made by reweighting the previous elements, as follows: 40 percent for program audit, 20 percent for the school-level plan, and 20 percent for the December and April implementation reports. This factor constituted 70 percent of the overall evaluation of the school.

In the program implementation report submitted to the Department of Education, reasons for not implementing plans as scheduled were identified in six categories: personnel, materials, parent and community participation, fiscal, time management, and planning.

The analysis of the first program implementation report showed that certain reasons were cited more frequently than others. The category, "insufficient time allocated in original planning for completion of activity," was the most frequently mentioned reason for nonimplementation of activities. The component that appeared to be the most difficult to implement on schedule in early childhood education multifunded schools was intergroup relations in which 10.7 percent of the activities were not implemented on schedule. Ten percent of the activities scheduled for parent education were not implemented on schedule.

Table 6 shows the distribution of activities by component for the first program implementation report. "Activities" were defined as events that, taken collectively, were considered necessary and sufficient for achieving the objectives within each of the components of the program.

Table 5

Statewide Distribution of Scores for Determination of Expansion Eligibility, Spring, 1974

Scoring criteria	Weight by percent	Funding	Mean standard score	Standard deviation	School mean scores by quartile		
					Q1	Q2	Q3
ECF school's own plan rating	25	Partial	48.3	8.9	41.1	47.8	54.6
		Full	54.2	9.1	47.1	54.8	61.2
Degree of program implementation by December	25	Partial	50.8	9.7	46.8	52.5	57.5
		Full	49.9	7.5	45.3	50.8	55.2
Department program audit	50	Partial	47.2	9.7	41.7	47.1	53.8
		Full	52.5	8.1	47.1	52.3	58.1

Total distribution

Funding	Real scores by quartile			Average standard score	Standard deviation
	Q1	Q2	Q3		
Partial	177.5	193.1	210.8	193.6	26.7
Full	197.9	208.3	222.7	209.0	21.9

00619

The ratings of the on-site program audits and the school-level plans were compared. Generally, the average effectiveness rating corresponded to the quartile distribution of the on-site program audit and the school-level plans. Table 7 shows the average effectiveness rating for early childhood education schools by quartile distribution. Effectiveness ratings derived from the school evaluation reports, as a part of the consolidated evaluation, were based on a 1 to 5 scale, with 1 representing "exemplary" and 5, "failure."

The data in Table 7 indicate that the schools which rated higher on the on-site program audits and on their school-level plans tended to be more successful in implementing their plans. It appears that the prescribed program planning process by the state, coupled with a detailed program audit conducted by State Department of Education personnel, produced information about program results which can be evaluated with greater confidence than has been true historically when information was obtained by end-of-the-year district reports only.

Individual schools of overall high quality or with high quality components such as reading, parent participation, or bilingual education can be identified.

As a result of this improved program assessment process, the Department of Education now has baseline data on each school which produces program evaluation capabilities such as longitudinal analysis and program component analysis, based on both weaknesses and strengths, which was not possible in the past.

Table 6
Distribution of ECE Classroom Activities Reported by Program Component, December, 1973

Program component	Number of activities		Activities not implemented†	
	Proposed	Implemented*	Number	Percent of total proposed
Language development	10,569	8,292	761	7.2
Mathematics	7,362	5,800	611	8.3
Health/auxiliary services	6,839	5,440	625	9.1
Intergroup relations	2,688	1,906	287	10.7
Parent participation	6,250	4,860	523	8.4
Parent education	4,082	3,037	408	10.0
Staff development	6,219	5,009	435	6.1
Optional	4,542	3,784	276	11.8

*For entire year.
†From September through March.

Table 7
Average Program Effectiveness Ratings Compared to Results of On-site ECE Program Audits and School-level Plan Ratings

Distribution of evaluation ratings, by quartile	Average effectiveness ratings, by component*					
	Language development	Mathematics	Health/ auxiliary	Parent participation	Parent education	Staff development
On-site program audit						
Below Q1	2.6	2.8	3.0	2.8	2.3	2.9
Q1 – Q2	2.5	2.6	3.0	2.4	2.3	2.8
Q2 – Q3	2.4	2.7	3.0	2.5	2.2	2.7
Above Q3	2.4	2.6	2.9	2.4	2.1	2.6
School-level plans						
Below Q1	2.7	2.9	3.1	2.5	2.3	2.9
Q1 – Q2	2.5	2.8	3.1	2.6	2.3	2.8
Q2 – Q3	2.4	2.6	3.0	2.5	2.3	2.7
Above Q3	2.3	2.6	2.9	2.5	2.0	2.7

*The average effectiveness ratings, based on a 1–5 scale, were derived from data independent of the program audit and school-level plan evaluation. The mean score is between 2.0 and 2.49

00020

Chapter 3
Product Evaluation

Pursuant to the statutorily required annual evaluation, data were collected to determine the degree of effectiveness of each of the six mandatory components in the early childhood education program. The six components are:

1. *Reading/language development.* This component includes reading readiness, decoding, comprehension, and use of written language. The component covers writing skills, including grammar, punctuation, and spelling, in addition to the reading skills that can be evaluated through reading achievement tests.

   Language development also includes development of facility in oral language for all students who use standard English, limited English, and dialects. Language development may also include English as a second language (ESL) and/or bilingual programs.
2. *Mathematics.* The mathematics component includes numbers readiness, computation skills, and concept development and application.
3. *Health/auxiliary services.* Counseling and guidance, attendance, nutrition, library, and health services are included in the health/auxiliary services component. Health services include screening and diagnosis, referral, and follow-up efforts in the areas of visual, auditory, dental, physical, and emotional health. For ECE (Senate Bill 1302) funding, health is the only required service in this component.
4. *Parent education.* This component includes activities designed to enable parents to become an integral part of the education of their children.
5. *Parent participation and community involvement.* This component includes participation in program planning, implementation, modification, and evaluation. Also included is direct involvement of parents in the formal classroom education of their children.
6. *Staff development and inservice education.* The employment, recruitment, and assignment of teachers and paid and unpaid aides are included in the sixth mandatory component. Included are preservice and inservice training activities for teachers, other professional staff, aides, and volunteers.

Reading/Language Development Component

In the reading/language development component, the achievement test scores showed an average gain of 1.1 months of growth per month of instruction in grades one through three. In some program combinations, these gains were as high as 1.4 months.

The reading/language development component was directed toward improvement of reading skills and of written and oral language skills. Participating schools were encouraged to restructure their reading and language programs by using a variety of methods and new instructional materials.

Participation in Reading Instruction

A total of 134,470 students in kindergarten and grades one, two, and three were tested in reading/language development activities in the ECE program. Table 8 shows the number and percent of students tested by grade level. Students in ECE language development programs also were reported by the several funding sources; the number and percent of students, by funding source, are presented in Table 9. Schools used a variety of tests to assess this component. When norm-referenced test results were reported, the data were aggregated.

Table 8

Number and Percent of Students Tested in ECE Reading/Language Development, 1973-74

Grade level	Students tested	
	Number	Percent of total
Kindergarten	28,944	21.5
One	39,145	29.1
Two	34,302	25.5
Three	32,079	23.9
Total	134,470	100.0

90021

Objectives, Activities, and Findings

More than 79 percent of all ECE school evaluations contained statements of measurable objectives. Objectives were most frequently stated in terms of growth per month of instruction, as measured by norm-referenced standardized tests or by the upward shift of student scores in three different quartile ranges. The quartile ranges are presented in terms of national norms.

Comparisons were made between the measurable quality of the objectives (as determined by Department of Education evaluation consultants) and the results reported by the schools. Typically, the more measurable the objective, the greater the incidence of attainment. School personnel who lacked the skills to prepare measurable objectives generally also had great difficulty in reporting the results of their programs. Since ECE's legislatively specific evaluation process focused on the effectiveness of individual programs in meeting their own plan objective, poorly stated objectives alone may have caused low evaluation ratings for some programs. Programs with less measurable objectives frequently yielded findings that were not directly related to their stated objectives. (See Table 10.) Objectives were either exceeded or at least partially attained by nearly 600 participating schools, according to their own reports.

Analyses were also made to determine the types of activities most frequently reported by programs whose objectives were either exceeded, attained, or partially attained. The activities most frequently reported by successful language development programs are presented in Table 11 and show that diagnostic and prescriptive materials were used most frequently. The kinds of activities reported by schools for enhancing student performance suggest that ECE schools actively sought to restructure their language and reading programs.

A variety of methods to evaluate the effectiveness of language development programs was employed by ECE schools. The most frequently reported evaluation activities successful in measuring reading progress are reported in Table 12. The use of two or more standardized tests either used alone or with locally developed criterion-referenced tests was reported by more than 50 percent of the schools.

Although the use of norm-referenced tests in schools funded with only ECE monies was optional, ECE schools funded with either ESEA, Title I, or educationally disadvantaged youth (SB 90) monies were required to administer stand-

Table 9

Students Tested in ECE Reading/Language Development, by Funding Source, 1973-74

Funding source	Students tested	
	Number	Percent of total
ECE/Title I/SB 90/Other*	35,714	26.6
ECE/Title I/SB 90	30,779	22.9
ECE/Title I	22,484	16.7
ECE	21,132	15.7
ECE/Title I/Other*	15,171	11.3
ECE/Other*	5,955	4.4
ECE/SB 90	2,288	1.7
ECE/SB 90/Other*	947	.7
Total	134,470	100.0

*"Other" includes Miller-Unruh, bilingual education, and Indian early childhood education.

Table 10

Quality of ECE Schools' Objectives in Reading/Language Development Programs for Each of Six Types of Results Reported, 1973-74

Type of results reported	Average quality of schools' objectives, by percent			Number of schools
	Measurable*	Vague but measurable*	Nonmeasurable*	
Exceeded objective	88.8	11.2	0.0	240
Attained objective	64.3	32.8	2.9	235
Partially attained objective	75.0	19.8	5.2	116
Did not attain objective	76.6	6.7	16.7	30
Results not stated	42.4	19.2	38.4	146
Results not related to objective	25.1	12.1	62.8	199
Total schools	60.7	18.7	20.6	966
Average percent	79.4			

*As defined by Department evaluation consultants.

00022

ardized norm-referenced achievement tests for pretest and post-test comparisons of achievement results. Schools not receiving any funds for disadvantaged children were permitted to use criterion-referenced measures for achievement.

In those ECE schools using normative standardized achievement measures, months of gain in reading skill per month of instruction were computed for students in grades one, two, and three. In computing gain scores, only those students were included for whom both pretest and post-test data were available.

Test results revealed that, with an average of seven months between the pretest and the post-test, those pupils in schools receiving ECE funds typically attained 1.1 months growth in reading achievement for each month of instruction. (See Table 13.) Previous evaluations of specially funded programs have indicated that .7 month of growth per month of instruction was typical for disadvantaged children. The average child, with no special instruction, should gain 1.0 month per month of instruction. Analysis by grade level and funding source were made, and results indicated that certain combinations of funding sources were more successful that others in producing growth. Programs were ranked by funding source and by student gain between pretest and post-test. These data are presented in tables 14, 15, and 16 and show that when an ECE program was combined with either ESEA, Title I, funded programs or "Other" (usually Miller-Unruh), the greatest gains were realized for ECE participants in combined programs. Lesser gains were realized when ECE programs were combined with selected educationally disadvantaged programs, such as the educationally disadvantaged youth program (SB 90). However, gains in the combined programs, with minimal state monitoring and no requirement to submit plans or annual evaluations, fell below the 1.1 month level of growth only in grade three.

Programs such as ECE with the most descriptive and well-defined guidelines, program audits, and specific objectives have a better chance of pro-

Table 11

Classroom Strategies Most Frequently Reported by Successful Reading/Language Development Programs in ECE Schools, 1973-74

Rank	Classroom management strategy used	Percent of successful* schools reporting
1	Diagnostic/prescriptive materials	62.1
2	Individualized instruction within regular classroom	40.8
3	Instructional aides	32.7
4	Commercially developed instructional materials	16.9
5	Reading lab centers	16.9

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Table 12

Evaluation Tools Most Frequently Reported by Successful Reading/Language Development Programs in ECE Schools, 1973-74

Rank	Type of evaluation	Percent of successful* schools reporting
1	Two or more norm-referenced standardized tests	39.3
2	Two or more norm-referenced standardized tests with locally developed criterion-referenced tests	12.7
3	Two or more norm-referenced tests with commercially developed criterion-referenced tests	10.7
4	One norm-referenced standardized test	9.6

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Table 13

Average ECE Student Progress in Reading/Language Component, 1973-74

Grade level	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
One	14,716	1.1	1.9	1.1
Two	30,982	1.7	2.5	1.1
Three	28,803	2.4	3.3	1.1

*An average of seven months elapsed between pretest and post-test.

00023

Table 14
Average Grade One ECE Student Progress in the Reading/Language Component, by Funding Source, 1973-74

Funding source	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
ECE/Title I/Other†	1,818	1.1	2.0	1.3
ECE/Title I/SB 90/Other†	2,930	0.9	1.8	1.3
ECE	2,402	1.2	2.0	1.1
ECE/Title I	3,251	1.1	1.9	1.1
ECE/SB 90	269	1.0	1.8	1.1
ECE/Other†	330	1.2	2.0	1.1
ECE/Title I/SB 90	3,716	1.0	1.7	1.0
Total	14,716			
Average for all sources		1.1	1.9	1.1

*An average of seven months elapsed between pretest and post-test.

†"Other" includes Miller-Unruh, bilingual education, and Indian education. Miller-Unruh programs represent the majority.

Table 15
Average Grade Two ECE Student Progress in the Reading/Language Component, by Funding Source, 1973-74

Funding source	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
ECE/Other†	1,325	2.0	3.0	1.4
ECE	4,606	2.1	3.0	1.3
ECE/Title I	4,367	1.8	2.7	1.3
ECE/SB 90	520	1.5	2.3	1.1
ECE/Title I/SB 90	7,248	1.6	2.4	1.1
ECE/Title I/Other†	3,334	1.7	2.5	1.1
ECE/Title I/SB 90/Other†	9,582	1.6	2.3	1.0
Total	30,982			
Average for all sources		1.7	2.5	1.1

*An average of seven months elapsed between pretest and post-test.

†"Other" includes Miller-Unruh, bilingual education, and Indian education. Miller-Unruh programs represent the majority.

Table 16
Average Grade Three ECE Student Progress in Reading/Language Component, by Funding Source, 1973-74

Funding source	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
ECE/Other†	1,153	3.1	4.0	1.3
ECE/Title I/Other†	3,282	2.3	3.2	1.3
ECE	4,215	3.1	3.9	1.1
ECE/Title I	3,559	2.5	3.3	1.1
ECE/Title I/SB 90	6,711	2.3	3.1	1.1
ECE/Title I/SB 90/Other†	9,308	2.2	3.0	1.1
ECE/SB 90	575	2.4	3.1	1.0
Total	28,803			
Average for all sources		2.4	3.3	1.1

*An average of seven months elapsed between pretest and post-test.

†"Other" includes Miller-Unruh, bilingual education, and Indian education. Miller-Unruh programs represent the majority.

06624

ducing positive results than programs without these requirements.

Data obtained from the state assessment program on the performance of third grade students in the spring, 1974, were analyzed for schools conducting ECE programs. When the state assessment data, as shown in Table 17, were statistically adjusted to account for predicted levels of achievement (including socioeconomic status, bilingualism, and mobility) and variations in beginning scores, the analysis showed that the rankings of programs by funding source were substantially the same as those indicated by the data submitted by the ECE schools.

Table 17

ECE Program Test Results as Compared to 1974 State Assessment Program Results, by Funding Source

Funding source	Rank order	
	School evaluation reports	State assessment program results
ECE/Miller-Unruh*	1	1
ECE	2	2
ECE/Title I/ Miller-Unruh	4	3
ECE/Title I	6	4
ECE/Title I/ SB90/Miller-Unruh	5	5
ECE/Title I/SB 90	3	6

* "Other" in district evaluation reports.

Analyses were also made for students in kindergarten and grades one, two, and three to determine the shift in percent of students scoring in each quarter of the distribution in terms of national norms. In computing the percent of quartile movement, test data for all students were used with the assumption that although student populations would shift between the pretest and the post-test, student characteristics (such as socioeconomic status, bilingualism, and so forth) would remain substantially the same. Consequently, the number of students included in the computation of gain scores (tables 13, 14, 15, and 16) differs from the number of students included in determining percentage shifts in each quarter of the distribution. (See Table 18.) Analyses of gains for students in kindergarten and grades one, two, and three showed there was a decrease of 13 percentage points for the students scoring in the lowest quarter of the distribution. There was an increase of 9 percentage points in the upper quarter of the distribution, while the second and third quarters remained about the same.

Test information reported by districts which was either incomplete or contained procedural irregularities was not aggregated with statewide results. Incomplete data or irregular procedures included instances in which: (1) either pretest or post-test information was omitted; (2) test results were not given in grade equivalents; (3) test results were combined for several grade levels; (4) the standardized measure used in the pretest differed from the one used in the post-test; (5) nonstandardized tests were used; or (6) no test results were reported.

Table 18

Number of ECE Students Tested and the Distribution of Reading/Language Development Achievement Scores at Pretesting and Post-testing, 1973-74

Grade level	Number of students tested	Test	Percent of students scoring in each quartile			
			First	Second	Third	Fourth
Kindergarten	16,583	Pre	33.3	26.8	22.2	17.7
	28,583	Post	14.2	19.7	24.9	41.2
One	21,495	Pre	46.8	20.4	17.0	15.8
	40,643	Post	26.4	25.9	22.6	25.1
Two	23,998	Pre	38.4	32.0	18.5	11.1
	33,883	Post	31.5	30.4	20.9	17.2
Three	22,136	Pre	46.9	27.7	15.1	10.3
	31,918	Post	38.4	26.4	20.6	14.7

00025

Mathematics Component

In the mathematics component, the achievement test scores showed an average gain of 1.2 months of growth per month of instruction in grades one through three. The expected growth is one month of growth per month of instruction for the average student and .7 month for disadvantaged students.

The mathematics component was directed towards enhancing the mathematics instruction among all student participants by encouraging the restructuring of mathematics programs through the use of materials and resources provided in the early childhood education program.

Participation in Mathematics Instruction

A total of 122,611 students in kindergarten and grades one, two, and three were tested in mathematics instruction activities in schools with ECE programs. (See Table 19.) Most ECE participants were served in schools having other state and federally funded programs. The number and percent of students tested by funding source are presented in Table 20.

Table 19

Number and Percent of Students Tested in ECE Mathematics Programs, 1973-74

Grade level	ECE students tested	
	Number	Percent
Kindergarten	25,060	20.5
One	36,069	29.4
Two	30,676	25.0
Three	30,806	25.1
Total	122,611	100.0

Objectives, Activities, and Findings

More than 75 percent of the schools' evaluation reports contained measurable objectives relating to the development of mathematics skills. Objectives were most frequently stated in terms of the increased academic progress or in terms of months of growth per month of instruction, as determined by norm-referenced standardized achievement tests.

Analyses were made of the measurable quality of program objectives (as determined by Department evaluation consultants) and the results reported by the schools. Findings indicated that the more measurable the objective the greater the incidence of determinable program success. Schools having projects with nonmeasurable objectives reported more results that were not directly related to stated program goals. (See Table 21.)

Table 20

Number and Percent of Students Tested in ECE Mathematics Programs and Percent Supported by Each Funding Source, 1973-74

Funding source	ECE students tested	
	Number	Percent
ECE/Title I/SB 90/Other*	31,918	26.0
ECE/Title I/SB 90	27,899	22.8
ECE/Title I	21,144	17.2
ECE	20,211	16.5
ECE/Title I/Other*	13,920	11.4
ECE/Other*	4,308	3.5
ECE/SB 90	2,248	1.8
ECE/SB 90/Other*	963	.8
Total	122,611	100.0

*"Other" includes Miller-Unruh, bilingual education, and Indian early childhood education.

Table 21

Quality of ECE Schools Objectives in Mathematics Programs for Six Types of Results Reported, 1973-74

Types of results reported	Average quality of schools' objectives, by percent			Number of schools
	Measurable*	Vague but measurable*	Nonmeasurable*	
Exceeded objective	38.2	61.8	0.0	89
Attained objective	46.2	53.4	0.4	234
Partially attained objective	45.8	53.4	0.8	131
Did not attain objective	50.0	42.9	7.1	42
Results not attained	39.2	48.1	12.7	79
Results not related to objective	16.0	20.5	63.5	326
Total schools				901
Average percent	34.0	41.4	24.6	
	75.4			

*As determined by Department staff.

00026

An analysis was made of the types of activities in mathematics instruction most frequently reported in use by the 454 ECE schools which either exceeded, attained, or partially attained their stated objectives. The report on these activities is presented in Table 22.

The variety of activities reported by schools for improving student performance in mathematics suggests that ECE schools have gained from their experiences with other local, state, and federally funded programs.

ECE schools used a variety of procedures for evaluating their mathematics programs. The most frequently reported activities successful in helping schools assess mathematics progress are reported in Table 23. The findings for mathematics are similar to those in language development: Norm-referenced standardized tests and locally developed criterion-referenced tests were used in more than two-thirds of the ECE schools.

In the 901 ECE schools using standardized tests, average months of gain in mathematics per month of instruction were computed for students in grades one, two, and three. In determining months of gain, only those students were included for whom both pretest and post-test scores were available.

Results indicated that, with an average of seven months between pretest and post-test, students in grades one, two, and three typically gained 1.2 months or more in measured mathematics skills for each month of instruction. (See Table 24.)

Table 22

Activities Most Frequently Reported by Successful Mathematics Programs in ECE Schools, 1973-74

Rank	Classroom management strategy used	Percent of successful* schools reporting
1	Instructional aides to reinforce teacher instruction	48.2
2	Whole class instruction	32.6
3	Individualized instruction within the regular classroom	30.0
4	Use of parent volunteers	26.4
5	Related staff inservice training	22.9

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Table 23

Evaluation Tools Most Frequently Reported by Successful Mathematics Programs in ECE Schools, 1973-74

Rank	Type of evaluation	Percent of successful* schools reporting
1	Two or more norm-referenced standardized tests	46.7
2	One norm-referenced standardized test	13.0
3	Two or more norm-referenced standardized tests with locally developed criterion-referenced tests	11.0

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Analyses by grade level for each of the several funding sources revealed that programs served by certain combinations of funds attained greater results than did others. (See tables 25, 26, and 27.)

Analyses were also conducted for students in kindergarten and grades one, two, and three regarding the percent of movement out of the lower quarters and into the higher quarters of the distribution of mathematics achievement scores. Findings summarized in Table 28 indicate that there was a 16 percent reduction of students in the lowest quarter of the distribution and an increase of more than 12 percent in the highest quarter. Changes in the second and third quarters of the distribution were fairly small.

In computing the percent of quartile shift for schools reporting in those terms, test data for all students were used with the assumption that student population characteristics such as socio-economic status, bilingualism, and so forth would remain similar regardless of pupil mobility. As a result, the number of students included in the analysis of gain scores differs from the number of students included in computing percentage shifts.

Test information reported by districts which was either incomplete or contained procedural irregularities was not aggregated with statewide results. Incomplete data or irregular procedures included instances in which (1) either pretest or post-test information was omitted; (2) test results were not given in grade equivalents; (3) test results were combined for several grade levels; (4) the standardized measure used in the pretest differed from the measure used in the post-test; (5) nonstandardized tests were used; or (6) no tests results were reported.

00027

Table 24

Average Mathematics Achievement by ECE Students, 1973-74

Grade level	Number of students tested	Average grade equivalent score		Average months of gain	
		Pretest	Post-test	Between pretest and post-test	Per month of instruction*
One	14,660	1.1	1.9	8	1.2
Two	26,904	1.8	2.7	9	1.3
Three	24,397	2.5	3.4	9	1.4

*An average of seven months elapsed between pretest and post-test.

Table 25

Number of Grade One ECE Students Tested and the Average Mathematics Achievement, by Funding Source, 1973-74

Funding source	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
ECE/SB 90	268	0.9	1.9	1.4
ECE	2,444	1.2	2.1	1.3
ECE/Title I	3,186	1.1	2.0	1.3
ECE/Other†	390	1.2	2.1	1.3
ECE/Title I/SB 90	3,716	1.0	1.7	1.1
ECE/Title I/Other†	1,673	1.1	1.9	1.1
ECE/Title I/SB 90/Other†	2,983	1.0	1.7	1.0
Total	14,660			
Average for all sources		1.1	1.9	1.2

*An average of seven months elapsed between the pretest and the post-test.

†"Other" includes Miller-Unruh, bilingual education, and Indian early childhood education.

Table 26

Number of Grade Two ECE Students Tested and Average Mathematics Achievement, by Funding Source, 1973-74

Funding source	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
ECE/Title I	4,201	1.8	2.8	1.4
ECE/Other†	924	2.0	3.0	1.4
ECE/Title I/Other†	2,976	1.7	2.7	1.4
ECE	4,363	2.1	3.0	1.4
ECE/Title I/SB 90	6,183	1.6	2.5	1.3
ECE/Title I/SB 90/Other†	7,678	1.6	2.5	1.3
ECE/SB 90	479	1.5	2.3	1.1
Total	26,904			
Average for all sources		1.8	2.7	1.3

*An average of seven months elapsed between the pretest and the post-test.

†"Other" includes Miller-Unruh, bilingual education, and Indian early childhood education.

00028

Table 27

Number of Grade Three ECE Students Tested and Average Mathematics Achievement, by Funding Source, 1973-74

Funding source	Number of students tested	Average grade equivalent score		Average months of gain per month of instruction*
		Pretest	Post-test	
ECE/Other†	816	2.9	4.0	1.6
ECE	3,832	2.9	3.9	1.4
ECE/Title I	3,251	2.5	3.5	1.4
ECE/Title I/SB 90	5,601	2.3	3.3	1.4
ECE/Title I/Other†	2,857	2.4	3.4	1.4
ECE/Title I/SB 90/Other†	7,485	2.4	3.3	1.3
ECE/SB 90	555	2.5	3.1	.9
Total	24,397			
Average for all sources		2.5	3.5	1.4

*An average of seven months elapsed between the pretest and the post-test.

†"Other" includes Miller-Unruh, bilingual education, and Indian early childhood education

Table 28

Distribution of ECE Student Mathematics Achievement Scores at Pretesting and Post-testing, 1973-74

Grade level	Number of students tested	Test	Percent of students scoring in each quartile			
			First	Second	Third	Fourth
Kindergarten	15,336	Pre	34.6	27.2	20.4	17.8
	25,936	Post	17.1	26.2	24.3	32.4
One	21,211	Pre	42.7	27.9	16.3	13.1
	36,021	Post	24.0	23.6	24.1	28.3
Two	20,033	Pre	39.9	27.8	21.2	11.1
	29,752	Post	26.2	28.8	20.9	24.1
Three	18,163	Pre	49.4	25.2	15.3	10.1
	30,020	Post	35.4	28.5	19.9	16.3

Health/Auxiliary Services Component

Health/auxiliary services were reported as effective in providing health examinations and received an above 75 percent effective overall rating.

Health services are those required as a result of the comprehensive health needs assessment within the early childhood education school. This component must also include auxiliary services, such as pupil personnel services, and library and media services in multifunded schools.

Objectives and Activities

The major auxiliary services objectives reported were related to providing health services, pupil personnel services, and referral services in ECE schools. The specific objectives reported most frequently included providing health examinations, improving school attendance, providing health information, and improving the personal health of the participants. Other major objectives focused on improving pupil attitudes, providing library and media services, and improving academic achievement.

Specific activities were emphasized in each of the auxiliary services provided, such as psychological services, health examinations, and general services within the library and media services.

Evaluation of Health/Auxiliary Services

A direct relationship exists between the frequency of activities listed in objectives and their

importance, as rated by school personnel. Schools were asked to do two separate ratings, one of effective activities and one of important activities. These rankings were compared to evaluate the relationships between the rankings. Auxiliary services usually are evaluated by identifying the criteria for a successful program and assessing the level of the effectiveness of specific services in meeting those criteria. Seventy percent of the evaluation reports stated the criteria in terms of the amount or number of services provided. Only 30 percent reported criteria related to expected changes in pupil or staff behavior or performance. The most frequent criterion for effectiveness was the number of health examinations given.

The level of effectiveness was determined primarily by three evaluation methods: subjective judgment by staff, counting of participants or activities, and objective measurements. The analysis of the school reports showed that 47 percent of the services were evaluated subjectively and 42 percent by enumeration data. The remaining 11 percent of the health/auxiliary services were evaluated by objective measurements such as rating scales.

The results reported in the auxiliary services component generally related to the stated objectives. Of the schools reporting measurable objectives, 41 percent had attained their objectives, 30 percent achieved part of their objectives, 3 percent did not attain their objectives, and 26 percent reported results unrelated to their objectives. The reports rated the level of effectiveness of specific services in terms of meeting their school objectives. Pupil personnel services were 77 percent effective or very effective. Health services were rated 79 percent effective or very effective, and library services ratings were 85 percent effective or very effective.

A comparison was made between the importance and effectiveness of the major services provided. The results are shown graphically in figures 1, 2, and 3. The greatest difference between importance and effectiveness was seen in two specific services. Library and media materials ranked high in effectiveness but low in importance, and medical services ranked low in effectiveness but high in importance.

Positive results submitted in relation to the stated objectives are summarized in Table 29 based on data submitted by schools and measurable performance objectives. It is evident that auxiliary services were effective in ECE programs. This effectiveness was determined from the resulting improvement noted in pupil health, pupil attitudes, and improved school attendance.

The major recommendations made in the reports for health/auxiliary services in general were to continue the present program, improve communications, provide additional services, increase parent involvement, improve program objectives, and provide inservice workshops.

	Five most important	Five least important
Five most effective	Psychological testing Speech therapy Individual counseling Parent counseling	Teacher conference
Five least effective	Welfare and attendance	Psychometric help Guidance inservice Home counseling Group counseling

Figure 1. Relative importance and effectiveness of ten major pupil personnel services in ECE schools, 1973-74

	Three most important	Two least important
Three most effective	Media centers General services	Materials
Two least effective	Personnel	Mobile centers

Figure 2. Relative importance and effectiveness of five major library and media services, as reported by ECE schools, 1973-74

	Four most important	Three least important
Four most effective	Nursing Diagnostic	Nutrition Health education
Three least effective	Dental Medical	Family services

Figure 3. Relative importance and effectiveness of seven major health services, as reported by ECE schools, 1973-74

00030

Table 29

Health/Auxiliary Services Program Objectives Most Frequently Attained in ECE Schools, 1973-74

Schools rank order	Objective attained	Percent of successful* schools reporting
1	Provision of health services	38
2	Provision of physical examinations	33
3	Provision of pupil personnel services	22
4	Provision of referral services	17
5	Improvement in participants' health	11
6	Provision of meals and snacks	10
7	Employment of auxiliary services personnel	10

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Parent Education Component

Parent education objectives usually related to expected changes in behavior and performance of parents, with an increase in skills and knowledge most often reported.

The parent education component required specific objectives and activities that would increase parent effectiveness by encouraging parents to become an integral part of the formal education process.

Eighty-seven percent of the major objectives reported for the parent education component were well defined, and 13 percent of the objectives were vague. Of the well-defined objectives, 61 percent were related to expected changes in behavior and performance of the parents, and 39 percent of the objectives concerned services provided by district or school staff.

Of the objectives related to expected changes in behavior and performance, reports by most schools concentrated on increased skills and knowledge of child growth and development by parents, increased program participation by parents, and more parental understanding and support of the school program.

Of the objectives related to services provided, the most frequently reported objectives were to provide for orientation sessions and parent classes and workshops to train parents for effective participation in school and class activities.

The most important activities reported were in the same general areas as the stated objectives: increased participation, instructional programs for parents, school activities, parental knowledge, and support of the education process through participation.

In a few school reports there were indications that the content of the proposed parent education component had been changed. The reason was usually that the objectives had been predetermined by project personnel and after parent surveys had been conducted, the programs were redesigned to meet the parents' stated needs.

Parent education activities were evaluated by identifying the criteria for a successful program and assessing the level of effectiveness of specific activities in meeting those criteria. In the schools that reported evaluation, 63 percent stated criteria related to expected changes in parent behavior, and 37 percent of the criteria related to services provided by the project staff. The most frequent criterion mentioned was parent opinion. Objective measurements, such as student and parent tests and questionnaires, accounted for 12 percent of the school evaluations.

Schools reporting well-defined objectives reported achieving 89 percent of the objectives related to expected changes in parent behavior. (See Table 30.) For objectives related to provision of services, the achievement was 67 percent. Two percent of all measurable objectives were unachieved, and 21 percent of all reported results were unrelated to the stated objectives.

In addition to listing the most important activities related to achieving stated objectives, each school also rated the level of effectiveness of the activities. The most important activities listed by the schools were rated by program personnel as the most effective. These were instructional classes for parents, participation in school activities, and parent-teacher conferences. The activities considered least important were rated as least effec-

Table 30

Most Frequently Reported Parent Responses to ECE Parent Education Activities, 1973-74

Schools rank order	Parent response	Percent of successful* schools reporting
1	Increased their understanding and support of the program	29
2	Attended scheduled classes and workshops	17
3	Participated in parent education activities	15
4	Increased their knowledge and skills	12
5	Visited school and participated in school activities	10

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

tive. Figure 4 shows the relationship between the importance and effectiveness of activities as reported.

The recommendations made in the parent education component indicated the need to improve communication between the homes and the school. Other recommendations were for additional classes for parents and for activities based on the needs of parents. The expansion of the parent education component by offering parents more opportunities for participation and more variety in the types of participation was also recommended.

	Three most important	Two least important
Three most effective	Instructional classes Participation in school activities Parent-teacher conferences	
Two least effective		Parent meetings Program orientation

Figure 4. Relative importance and effectiveness of five major parent education activities in ECE schools, 1973-74

Parent Participation and Community Involvement Component

Parent involvement activities rated most effective were parent-teacher conferences, advisory committee meetings, school-parent meetings, use of parent volunteers, and home communication.

The parent participation and community involvement component required specific plans for the improvement of communication between the schools and the community as well as parent participation in the planning, implementation, modification, and evaluation of the program and in the classroom education of the children.

In the early childhood education program, use of parents in the classroom was reported as one of the measurable major objectives. Other objectives were: to increase parent visits to the classroom, to recruit parent assistants, to identify community resource personnel, to improve attendance at school activities, and to increase parent involvement in planning, implementation, and evaluation.

Of the objectives related to services provided, the major ones reported most frequently by projects were dissemination of program information, program orientation, and home-school communication.

Three of the major objective areas reported by a large number of schools were reflected in the most important activities listed. These were program orientation, parent visits to schools and classroom, and attendance at school functions.

Parent involvement activities were evaluated by identifying the criteria for a successful program and assessing the level of effectiveness of the specific services provided. Sixty-six percent of the evaluations related to expected changes in parent behavior. Thirty-four percent of the criteria related to services provided by the project staff. The most frequent criterion used to measure effectiveness was the number of parents participating.

Of the evaluation methods used, 47 percent was enumeration of participants and activities, and 39 percent was subjective judgment. The remaining 14 percent was objective measurements, usually in the form of parent questionnaires, rating scales, or attitude scales.

In the parent involvement component, 52 percent of the schools achieved their objectives. Nineteen percent achieved part of their objectives, 17 percent reported negative results, and 12 percent reported results not related to their objectives.

The school reports rated the level of the effectiveness of major activities in terms of meeting school objectives. Parent involvement activities were rated mostly as effective or very effective. The most effective activities were parent-teacher conferences, advisory committee meetings, school-parent meetings, use of parent volunteers, and home-school communication. The least effective, according to school ratings, were cultural programs, baby-sitting services, home calls and visits, and planning sessions.

A comparison was made between the relative importance and effectiveness of the major parent involvement activities. The results are summarized in Figure 5.

The results of parent involvement most frequently reported are summarized in Table 31. This table includes only the specific outcomes indicated by the schools which reported results related to their stated objectives. Parent involvement activities most frequently resulted in increased time spent by parents as volunteers and aides, increased participation in school activities and meetings, involvement in program planning, implementation and evaluation, a better response to communications from school, better attendance at parent-teacher conferences, and a positive attitude taken by parents and students.

Of the recommendations made by the schools, 34 percent cited the recruitment and training of parent volunteers and aides to work at the school site; and 22 percent stressed the need for more effective communication between the school and the home. Frequent mention was made of the need for a liaison person to assist in this area. Other recommendations suggested increases in the number and variety of activities afforded to parents as a way to increase school participation and to increase the parents' involvement in the design and implementation of the school plan. The use of bilingual staff in the community was also recommended.

	Five most important	Four least important
Five most effective	Parent-teacher sessions Advisory group meetings School-parent meetings Use of parent aides Communications with the home	
Four least effective		Cultural programs Child care service Planning sessions Home calls, visits

Figure 5. Relative importance and effectiveness of nine parent involvement activities provided by ECE schools, 1973-74

Table 31

Effects of Parent Involvement Reported by ECE Schools Whose Results Related to Stated Objectives, 1973-74

Schools rank order	Parent response	Percent of successful* schools reporting
1	Spent more time as a volunteer or aide	18
2	Participated more in school activities and meetings	16
3	Became involved in program planning, implementation, and evaluation	9
4	Responded to communications from school	9
5	Attended parent-teacher conferences	8
6	Along with students expressed a positive attitude	8

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Staff Development and Inservice Education Component

The staff development component results reported most frequently indicated a greater use of individualized instruction, better organization of inservice training, and improvement in writing and instructional objectives.

Staff development and inservice education were required for all schools conducting an early childhood education program. Objectives and activities that would lead to improved performance by professional and nonprofessional personnel working in the program were included in each school plan. These activities served 27,105 persons in the early childhood education schools.

Objectives and Activities

The major staff development objectives established in early childhood education schools were related to the improvement of teaching techniques. Measurable performance objectives were recorded by 72 percent of the schools, while relatively vague objectives were reported by 28 percent of the schools. The well-defined objectives included a description of expected changes in the performance level of participants or in the services to be provided by district or school staff. Specific objectives included: improvement in individualized instruction and use of diagnostic/prescriptive techniques, improvement in writing instructional objectives, and improvement in planning other objectives related to the number or type of personnel to receive training.

The types of activities provided to attain objectives included school-level workshops on instructional methods and content, staff meetings, school or classroom visits, district and county workshops, college courses, conferences, and demonstrations. Content areas covered during inservice training activities included reading, mathematics, language, and general curriculum. Relatively few schools reported inservice activities that were related to the needs assessment, school-level planning, volunteers or tutors, parent involvement, or parent education.

Evaluation and Results

Evaluation criteria used to measure the effectiveness of staff development and inservice activities were related to these activities two out of every three times. About one-third of the schools mentioned classroom implementation by teachers as an evaluation criterion. Subjective judgments made up 67 percent of the methods by which the activities were evaluated, while 20 percent were based on objective measurements. Thirteen percent related program effectiveness to enumerative criteria.

In 87 percent of the ECE schools, respondents indicated that their major objectives were attained. Six percent of the schools recorded that objectives were partially attained, while 5 percent of the schools recorded results not related to stated objectives. Two percent of the schools indicated that their objectives were not attained, or they did not include any data on this component.

Comparisons were made between the importance and effectiveness of staff development and inservice activities. These results are presented in Figure 6. The greatest discrepancies were found in college classes (ranked high in importance and low in effectiveness) and demonstrations (ranked low in importance and high in effectiveness).

A summary of the positive results of staff development and inservice activities most frequently recorded appears in Table 32. These results indicated a greater use of individualized instruction in reading and mathematics, better organization of inservice training, and improvement in writing instructional objectives. Few schools reported improvement in teaching psychomotor skills, training in the use of personnel, or improvement in pupil attitudes as an outcome of staff development and inservice education activities.

Recommendations for Improving Staff Development

Schools participating in ECE programs reported frequent recommendations related to improved staff development programs and inservice education. The recommendations most often related to

	Five most important	Five least important
Five most effective	Reading instruction Diagnostic/prescriptive teaching Math instruction Informal workshops	Demonstrations
Five least effective	College classes	Formal lectures Intergroup relations Parent involvement Parent education

Figure 6. Relative importance and effectiveness of ten staff development activities provided by ECE schools, 1973-74

00034

improvement of the organization of inservice training, increased visitation to other schools and programs, improved workshops, and better use of consultants. Additional teacher involvement in needs assessment and in the development of inservice activities were also recommended. The need for additional training in teaching techniques, particularly individualized instruction as related to diagnostic and prescriptive techniques, and in methods related to improving pupil behaviors and attitudes, was mentioned frequently.

Table 32
Results of Staff Development Activities Most Frequently Reported by Successful ECE Schools, 1973-74

Schools rank order	Results	Percent of successful* schools reporting
1	Improved individualized instruction in reading	26
2	Improved individualized instruction in mathematics	16
3	Better organization of inservice training	11
4	Improvement in writing instructional objectives	8

*"Successful" refers to programs whose objectives were either exceeded, attained, or partially attained.

Optional Components

Optional components were included by nearly half of the ECE schools. These included music, art, health, affective areas, English as a second language (ESL), and bilingual education.

The optional component permitted local school program directors to provide information on topics not specifically identified as components in the evaluation report form. These included music, art, health and science, physical education, social studies, ESL, bilingual education, and psychomotor development. Additional subjects such as school management, program organization, the use of facilities and materials, and a series of similar topics were reported.

For programs described as optional, nearly 90 percent of all schools reported that their stated objectives had been either fully attained or partially attained. Effectiveness was most frequently measured by subjective methods.

Nearly one-half of the schools providing early childhood education programs reported activities in the optional component. More than 100 schools reported that a program for ESL was provided, some of them in the bilingual-bicultural program (Chapter 1258 of the 1972 statutes). It was found that the evaluation of the language development component of the bilingual-bicultural program relied heavily on objective methods, with several recommendations focusing on continuing or expanding the program as program needs increased. In general, programs achieved their stated objectives, and program effectiveness was evaluated by subjective techniques more often than by objective techniques. Specific recommendations related to the improvement of classroom management, better use of personnel, continued expansion of such programs, and improved program management.

The activities reported for the bilingual or ESL programs included the use of diagnostic and prescriptive teaching techniques and the use of instructional aides. The districts reported that the instructional aides were an effective part of the program.

Programs funded under the Bilingual Education Act were also required to develop objectives in mathematics and the support components. The report prepared by the Office of Program Evaluation and Research, entitled *Bilingual Education Act of 1972,* contains a complete description of the bilingual program as it was implemented in California schools.

00035

Chapter 4

Fiscal Management

Program expenditures as reported by the schools for 1973-74 showed that additional early childhood education funds were most often used to employ instructional aides in the schools.

The fiscal expenditures for each participating early childhood education school represented 20 percent of the program evaluation in the 1973-74 program year. Fiscal expenditures will represent 10 percent of the evaluation in the 1974-75 program year but will not be included thereafter.

The legislation requires that expenditures for the ECE program be supplemental to the districts' basic support per child. Each district signed an assurance in its original application certifying that its effort would be maintained. At the time of this report, specific audit procedures required under Education Code sections 6445.16, 6445.17, and 6445.18 had not been accomplished.

Final evaluation of fiscal management covered only the actual encumbrances for 1973-74 and the amounts that were either carried forward into the next fiscal year or overspent; there was no attempt to evaluate the appropriateness by which schools chose to allocate funds within the school budget.

Each school plan included the development of a budget which allocated funds in such a way that the objectives of the plan would be met most effectively.

In this first year, 59.4 percent of the schools completed the fiscal year with no more than a 5 percent difference between the amount allocated and the amount spent. Another 14.5 percent of the schools had ending balances with a 6 to 10 percent difference. The remaining 26.1 percent had an ending balance with either carry-over or deficit funds in excess of 10 percent of the original budget. The evaluation of fiscal management gave full credit to schools at 10 percent or under, and a penalty of 5 percent of the total evaluation for amounts over 10 percent but less than 25 percent. Any budget with either a 25 percent or greater deficit or carry-over was penalized 10 percent or half the possible fiscal management evaluation score. Schools that did not return budget information or whose figures were included in a district aggregate report received a zero score for the 20 percent evaluation of their fiscal management.

Table 33 presents the early childhood education expenditures by account classification. Over 44 percent of the expenditures were for instructional aides, and nearly 85 percent of the expenditures were in the general area of instruction, including salaries and instructional supplies.

While health needs assessment was a part of the required plan for each school, either district or community resources were utilized to fund this activity. Less than 1 percent of the expenditures were directed toward health services.

The Early Childhood Education Management Team found that in a few districts, schools did not receive the full allocation authorized by the State Board of Education, because a percentage of the funds was removed for district administration prior to distribution to the schools.

Recommendation

State fiscal reporting and audit procedures are essential to the early childhood education program in order to clarify the fiscal responsibilities at the school, district, and state levels.

00036

Table 33

Total ECE Expenditures by Account Classification, 1973-74

Account classification	Approved ECE budget	Expenditures and encumbrances	Not encumbered	Expenditure and encumbrance percent of total
100 Administration	$ 10,840	$ 12,084	$ (−1,244)	0.05
110-120 Salaries	129,955	123,701	6,254	0.68
190 Other expenses	59,113	50,853	8,260	0.28
200 Instruction				
212 Supervisors' salaries	428,373	420,898	7,475	2.33
213 Teachers' salaries	3,122,445	3,046,831	75,614	16.83
214 Other certificated salaries	718,746	672,109	46,637	3.71
220 Classified salaries	79,366	77,809	1,557	.43
221 Instructional aides	8,475,001	7,986,784	488,217	44.12
222 Other classified salaries	808,121	571,309	236,812	3.16
230 Textbooks	37,492	35,227	2,265	.19
240 Other books	128,133	101,786	26,347	.56
290 Other expenses	37,761	30,897	6,864	.17
291 Instructional supplies	1,962,856	1,744,443	218,413	9.64
292 Miscellaneous	1,064,324	773,395	290,929	4.27
400 Health services				
410-420 Salaries	158,230	136,344	21,886	.75
490 Other expenses	57,302	34,713	22,589	.19
500 Pupil transportation	750	750	0	.00
520 Salaries	17,464	9,494	8,470	.05
590 Other expenses	77,209	46,334	39,345	.26
600 Operation of plant				
620 Salaries	3,802	3,742	60	.02
690 Other expenses	15,058	12,011	3,047	.07
700 Maintenance of plant				
720 Salaries	18,522	3,060	15,462	.02
790 Other expenses	9,820	4,914	4,906	.03
800 Fixed charges	395,481	356,225	39,256	1.98
892 Lease/rental expense and fringe benefits	1,132,478	1,050,455	82,023	5.80
900 Food services				
910-920 Salaries	400	396	4	.00
990 Other expenses	41,767	31,407	10,360	.17
1100 Community services	500	6	494	.00
1110-1120 Salaries	38,745	29,774	8,971	.16
1190 Other expenses	26,206	17,994	8,212	.10
1200 Capital outlay	13,470	12,462	1,008	.06
1240 Improvement of sites	43,203	36,146	7,057	.20
1250 Buildings	70,856	71,267	(−411)	.39

C0037

Table 33 (Continued)

Account classification	Approved ECE budget	Expenditures and encumbrances	Not encumbered	Expenditure and encumbrance percent of total
1260 Equipment	$ 29,464	$ 23,815	$,5,649	.13
1261 Books	41,553	33,036	14,166	.18
1269 Other equipment	568,938	538,623	30,315	2.98
Indirect costs (rate percent)	55,814	44,258	11,556	
Total (without indirect costs)	19,823,520	18,100,970	1,722,550	100.00
Total (with indirect costs)	19,879,334	18,145,228	1,734,116	
Reports filed late	2,936,407			
Not filed or not separable	1,351,217			
Total	$ 24,166,958			

74-94 (03-0478) 87253-300 2-75 5M

00038